

SWBAT: define frequency, and sound

Jan 4-7:20 AM

# Welcome!!!

SECA Physics  
Tuesday 12 April 2016

H. Leslie Grebe

\* Pick up:

- blue concept sheet
- whiteboard, eraser, crayon
- slip of paper (for later)



Opening Question:

Check in with a neighbor: What would frequency mean for the waves in this picture?

HOW OFTEN WAVES HIT (PER SEC.)

Centering

Sep 7-7:04 AM

Daily 3 Questions

- \* Every day except test/project days
- \* 3 Questions on the topics of the day
- \* Main source of daily points
- \* I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

FYI...

You can't get your points if you don't have your NAME!!!


Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

Concept Sheet

~ 7 rows when we're done...

We'll fill in one term (row) today.

Concept	Meaning	Sym- bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $FREQ. = \frac{\#}{TIME}$	f	hertz $Hz = \frac{1}{sec}$	... 

Feb 18-6:50 AM

What does FREQUENCY mean (in physics)?

How often something happens

Repeating events per unit time

60 DOTS IN 10 SECONDS 6 hertz

$$f = \frac{\#}{\text{TIME}} = \frac{60}{10 \text{ sec}} = 6 \text{ Hz} \quad \begin{matrix} 6 \text{ per sec} & 6/\text{sec} \end{matrix}$$

SMILEY FACES HOW MANY IN 1 MIN.

6 FACES IN 1 MINUTE = 60 sec

$$f = \frac{\#}{\text{TIME}} = \frac{6}{60 \text{ sec}} = 0.1 \text{ Hz}$$

HOW MUCH TIME TO MAKE 1 FACE?  $\frac{60 \text{ sec}}{6} = 10 \text{ sec.}$

Apr 12-7:13 AM

Wave: a wiggle in time and space

Think of three examples of "waves" = wiggles in time and space

LIGHT	WAVING HAND	TREE/FLAG
JELLO	PARACHUTE/BLANKET	
WASHING MACHINE	MICROWAVE	WATER/OCEAN
	SOUND, MUSIC	RADIO

What about Ruffles potato chips? WAVES, CRINKLED

X TIME

Apr 8-9:02 AM

[http://www.youtube.com/watch?v=QxD\\_-e-GkmY&feature=related](http://www.youtube.com/watch?v=QxD_-e-GkmY&feature=related)

### Sound experiment:

<http://www.youtube.com/watch?v=ce7AMJdq0Gw&feature=related>

What is he doing? What's happening?

- TURNED ON BELL
- TURNED ON PUMP, SUCKED AIR FROM JAR
- SOUND QUIETER & QUIETER
- AIR BACK IN, GOT LOUD

Mar 29-7:38 AM

WHAT DO YOU THINK YOU KNOW  
ABOUT SOUND?

SOUND IS A WAVE THAT TRAVELS THROUGH  
A MEDIUM.

AIR  
WATER  
SOLIDS

Apr 12-9:37 AM

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1.	
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Sep 9-7:32 AM

1) What are the units for measuring frequency?

Hz hertz

2) What happened when the guy took the air out of the jar with the bell ringing?

QUIETER

3) Sound is a WAVE that travels through a medium.

Apr 12-7:15 AM